

WHAT IS CLAIMED IS:

1. A vehicle air bag for use with an on-board inflator mechanism, said vehicle air bag having at least one panel of coated air bag fabric, said fabric comprising:

a base fabric woven from synthetic multifilament yarns, said yarns being arranged in warp and fill directions;

10 in at least one of said directions, said yarns comprising first yarns of a first yarn size and second yarns of a second yarn size, said second yarn size being a lesser yarn size than said first yarn size;

15 said first yarns and said second yarns being arranged in predetermined positions in said base fabric to produce a crest and trough pattern on a surface thereof; and

said base fabric being coated with an elastomeric coating material.

20 2. A vehicle air bag as set forth in claim 1, wherein said elastomeric coating material is a urethane coating material.

25 3. A vehicle air bag as set forth in claim 2, wherein said air bag is configured as a side curtain air bag.

4. A vehicle air bag as set forth in claim 1, wherein said elastomeric coating material is a silicone coating material.

30 5. A vehicle air bag fabric as set forth in claim 1, wherein said multifilament synthetic yarns

of said base fabric have a size of no greater than 650 denier.

6. A vehicle air bag fabric as set forth in claim 5, wherein said first yarns and said second 5 yarns are arranged at predetermined yarn positions in said fill direction of said base fabric.

7. A vehicle air bag fabric as set forth in claim 6, wherein said warp direction of said base fabric comprises yarns of said first yarn size.

10 8. A vehicle air bag as set forth in claim 6, wherein said first yarns and said second yarns are located in alternating yarn positions in said fill direction of said base fabric.

15 9. A vehicle air bag as set forth in claim 8, wherein said first yarns and said second yarns are located in alternating yarn positions in said warp direction of said base fabric.

20 10. A vehicle air bag as set forth in claim 8, wherein said first yarn size is 420 denier and said second yarn size is 315 denier.

11. A vehicle air bag as set forth in claim 8, wherein said first yarn size is 315 denier and said second yarn size is 210 denier.

25 12. A vehicle air bag as set forth in claim 1, wherein said multifilament synthetic yarns of said base fabric are woven together in a plain weave arrangement.

30 13. A vehicle air bag as set forth in claim 1, wherein said multifilament synthetic yarns of said base fabric are woven together in a twill weave

arrangement.

14. A coated fabric suitable for use in a vehicle air bag, said coated fabric comprising:

5        a base fabric woven from synthetic multifilament yarns having a size no greater than 650 denier, said yarns being arranged in warp and fill directions;

10      in at least one of said directions, said yarns comprising first yarns of a first yarn size and second yarns of a second yarn size, said second yarn size being a lesser yarn size than said first yarn size;

15      said first yarns and said second yarns being arranged in predetermined positions in said base fabric to produce a crest and trough pattern on a surface thereof; and

      said base fabric being coated with an elastomeric coating material.

16. A coated fabric as set forth in claim 14, wherein said first yarns and said second yarns are located in alternating yarn positions.

17. A coated fabric as set forth in claim 15, wherein said first yarn size is 420 denier and said second yarn size is 315 denier.

18. A coated fabric as set forth in claim 15, wherein said first yarns and said second yarns are alternated in said fill direction of said base fabric.

19. A coated fabric as set forth in claim 15, wherein said first yarns and said second yarns are alternated in said warp direction of said base fabric.

5 20. A fabric suitable for use in a vehicle air bag, said fabric comprising:

a woven fabric made from synthetic multifilament yarns having a size no greater than 650 denier, said yarns being woven together in a plain weave pattern  
10 arranged in warp and fill directions; and

15 said yarns including first yarns of a first yarn size and second yarns of a second yarn size alternated in at least one of said warp and fill directions, said second yarn size being a lesser yarn size than said first yarn size.

21. A fabric as set forth in claim 20, wherein said woven fabric is coated with an elastomeric coating material.

22. A fabric as set forth in claim 21, wherein  
20 said elastomeric coating compound is a urethane coating compound.

23. A fabric as set forth in claim 21, wherein said elastomeric coating compound is a silicone coating compound.

25 24. A fabric as set forth in claim 20, wherein said first yarn size is 420 denier and said second  
yarn size is 315 denier.

25. A fabric as set forth in claim 24, wherein  
said base fabric has a thread count in the warp  
30 direction of about 46 threads per inch and a thread

count in the fill direction of about 48-50 threads per inch.

26. A fabric as set forth in claim 20, wherein said first yarn size is 315 denier and said second 5 yarn size is 210 denier.

27. A fabric as set forth in claim 26, wherein said base fabric has a warp thread count of about 59 threads per inch and a weft thread count of about 60-65 threads per inch.

10 28. A fabric as set forth in claim 20, wherein said first yarns and said second yarns are further alternated in said warp direction of said base fabric.

15 29. A coated fabric suitable for use in a vehicle air bag, said coated fabric comprising:

a base fabric made from synthetic yarns each having at least 136 filaments to produce an aggregate size of 420 denier;

20 said yarns being woven together in a twill weave pattern arranged in warp and fill directions so as to have a thread count of about 49x49; and

said base fabric being coated with a urethane coating material.